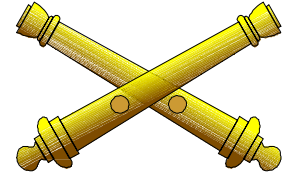


BCS FIRE MISSION PROCESSING

GUNNERY DEPARTMENT

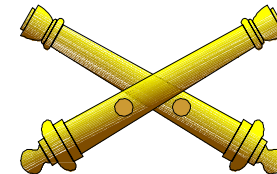


V30 de B24 AF, k
Grid 483 397 ALT 470, k
INF PLT i/o, VT i/e, k

FO: ④ i/e

**U
S
A
F
A
S**

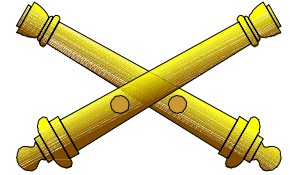
GUNNERY DEPARTMENT



p. 3-13

____;P:____;SB:____/____/____/____;C:____;SG:____,____;DT:____,____/____/____;ID:____;A:____;
FM;CFF:____;TGT:____;KNPT:____;CORD:____/____/____;GZ:____;RV:____;
OB:____;FST:____;DIR:____/____;DIST:____;SHIFT:____/____/____/____/____;
LAS:____;TYPE:____/____;DOP:____;SIZE:____/____;ATT:____;
CONT:____/____;ME:____/____;TIME:____/____;MIS:____;PRI:____;PTM:____;
ASF:____/____/____;SH:____/____;FZ:____/____,____/____;RDS:____;VOL:____;STR:____;
EOM:____;RAT:____;ASNFPF:____;UFFE:____/____/____/____,____/____/____/____;
LOT:____/____;CHG:____;LOTS:____/____/____;CHGS:____/____;FIRINT:____;
PTF:____;SPTF:____/____/____/____;SHTF:____/____/____/____/____/____;
PFFE:____;SHFFE:____/____/____/____/____/____;
PLAN:____;PHASE:____;HOB:____;RG:____;TOF:____.____;MAXORD:____;
SHEAF:____;VOLCMD:____;CSLOAD:____;RPT:____;

U
S
A
F
A
S



TIME ON TARGET

HOW BCS WILL COMPUTE THE TIME TO FIRE:

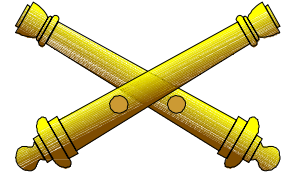
$$\begin{array}{rcl} & \text{TOT} & \\ - & \underline{(\text{TOF} + 5)} & \\ = & \text{BCS Time to fire} & \end{array}$$

Calculations based on BCS system time

**BCS will not allow you to execute if outside 10 minutes from TOT
(or after specified TOT time)**

BCS uses countdown clock in upper display to track

BCS will xmit "fire" to GDUs at 0 (if F8 pressed x2)

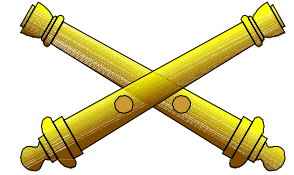


BALLISTIC PROCESSING

p. 3-1

- **BCS ballistic processing sequence (p. 3-1)**
 - (1) Ammunition Components Selection(p. 3-1 to 3-3)**
 - (2) Ballistic Preparation (p. 3-5 Charge Selection)**
 - (3) Ballistic Solution (p. 3-1)**

**U
S
A
F
S**



FFE PROJECTILE SELECTION

p. 3-2

EXAMPLE:

M198 BTRY (6 guns), no registration data available

Target Type/Subtype is Armor/Unknown

FM: BTRY (2)

AFU; AMMO file

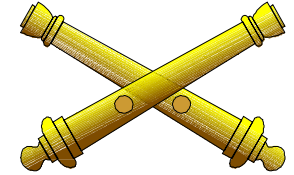
HEF 10

HEA 100

HER 30

**DETERMINE WHAT PROJECTILE
BCS WILL SELECT FOR FFE PHASE**

**U
S
A
F
A
S**



FFE PROJECTILE SELECTION

p. 3-2

EXAMPLE:

M198 BTRY (6 guns), no registration data available

Target Type/Subtype is Armor/Unknown

FM: BTRY (2)

AFU; AMMO file

HEF 10

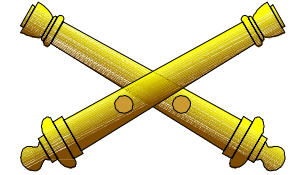
HEA 100

HER 30

**DETERMINE WHAT PROJECTILE
BCS WILL SELECT FOR FFE PHASE**

**HEA – HEF DOES NOT HAVE
SUFFICIENT QUANTITY**

**U
S
A
F
A
S**



FFE PROJECTILE SELECTION

p. 3-2

EXAMPLE:

M198 BTRY (6 guns), no registration data available

Target Type/Subtype is Weapon/Unknown

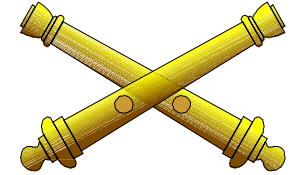
FM: BTRY (2)

AFU; AMMO file

| | |
|------------|------------|
| HEE | 100 |
| HEF | 100 |
| HEA | 100 |
| HER | 30 |

**DETERMINE WHAT PROJECTILE
BCS WILL SELECT FOR FFE PHASE**

**U
S
A
F
A
S**



FFE PROJECTILE SELECTION

p. 3-2

EXAMPLE:

M198 BTRY (6 guns), no registration data available

Target Type/Subtype is Weapon/Unknown

FM: BTRY (2)

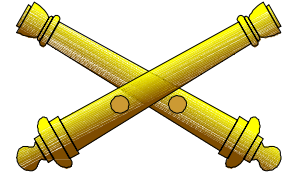
AFU; AMMO file

| | |
|-----|-----|
| HEE | 100 |
| HEF | 100 |
| HEA | 100 |
| HER | 30 |

**DETERMINE WHAT PROJECTILE
BCS WILL SELECT FOR FFE PHASE**

HEE

U
S
A
F
A
S

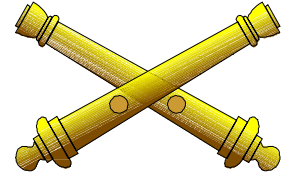


CHARGE SELECTION

p. 3-5

- **BCS selects the smallest charge from the selected propellant type that meets the trajectory requirement.**
- **BCS corrects the maximum range for the charge based on non-std conditions in the database.**
- **BCS compares the COB to COT Range to the Corrected Maximum Range for the charge.**
- **If the COB to COT Range is greater than 85% of the corrected maximum range than the BCS selects the next higher charge (low angle fire).**
- **If necessary, the BCS will change the selected propellant type.**

**U
S
A
F
S**



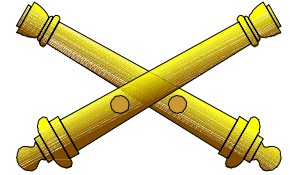
BALLISTIC PROCESSING

p. 3-1

- **BALLISTIC SOLUTION ~>**

- (1) Applies MVVs from AFU; MVV if application criteria is met**
- (2) Applies corrections for all other non-standard conditions in the database (met msg, ptemp, etc.)**
- (3) Uses modified point-mass equation and other algorithms to determine Fire Commands**

**U
S
A
F
A
S**



BCS MVV APPLICATION

PAGE 3-12; FM 6-40 PAGE 4-17

How FDO should apply MVVs:

- Same gun
- Same proj family
- Same prop lot
- Same charge or to other charges according to an order of preference:
 - » Down 1 chg
 - » Up 1 Chg
 - » Down 2 chgs
 - » Up 2 chgs
 - » To any other preferred chg
 - » From a preferred to a restricted chg

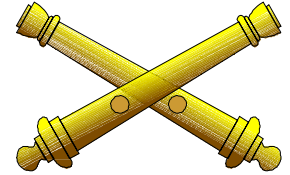
NEVER transfer a restricted chg!

How the BCS will apply MVVs:

- Same gun
- Same propellant type
- Same proj family
- **Same prop lot**
- Same charge or to other charges according to an order of preference:
 - > Down 1 chg
 - > Up 1 Chg
 - > Down 2 chgs
 - > Up 2 chgs
 - > Down 3 chgs
 - > Up 3 chgs

BCS will transfer a restricted charge!
•If no match is found BCS will transfer from another lot of the same type propellant!

**U
S
A
F
A
S**



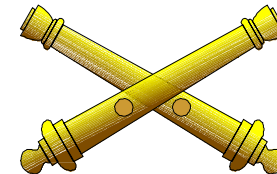
SHEAF SELECTION

p. 3-3 to 3-9

- **Each howitzer's individual aiming point is based on the sheaf selected**
- **Entries in the SIZE, ATT, PTF, and SHEAF field determine which sheaf the BCS will select**
- **The BCS will select a default sheaf based on PTF:**
 - 1 howitzer in FFE = CONVERGED SHEAF
 - 2 howitzers in FFE = OPEN SHEAF
 - 3 or more howitzers in FFE = BCS SPCL SHEAF
- **EXCEPTIONS: If CPH, AML, AMS, APL, or APS is the shell to fire the BCS will always use a CONV SHEAF**

**U
S
A
F
A
S**

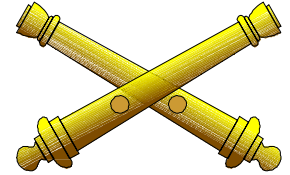
GUNNERY DEPARTMENT



p. 3-13

____;P:____;SB:____/____/____/____;C:____;SG:____,____;DTG:____,____/____/____;ID:____;A:____;_
FM;CFF:____;TGT____;KNPT:____;CORD:48300_/39700____/470____;GZ:____;RV:____;
OB:01;FST:____;DIR:____/____;DIST:____;SHIFT:____/____/____/____/____;
LAS:____;TYPE:____/____;DOP:____;SIZE:____/____;ATT:____;
CONT:____/____;ME:____/____;TIME:____/____;MIS:____;PRI:____;PTM:____;
ASF:____/____/____;SH:____/____;FZ:VT____/____,____/____;RDS:____;VOL:4_STR:____;
EOM:____;RAT:____;ASNFPF:____;UFFE:____/____/____/____,____/____/____/____
LOT____/____;CHG:____;LOTS:____/____/____;CHGS:____/____;FIRINT:____;
PTF:____;SPTF:____/____/____/____;SHTF:____/____/____/____/____/____;
PFFE:____;SHFFE:____/____/____/____/____/____;
PLAN:____;PHASE:____;HOB:____;RG:____;TOF:____.____;MAXORD:____;
SHEAF:____;VOLCMD:____;CSLOAD:____;RPT:____;

U
S
A
F
A
S

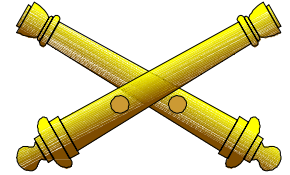


Cycle of Messages

p. 3-17 to 3-18

- **Fire Commands**
- **FM; MTO (If OBS is entered in FM;CFF)**
- **FM;FOCMD Messages**
 - Shot**
 - Splash**
 - Ready**
 - Rounds Complete**
- **Related Message Data**

**U
S
A
F
S**



FM; MTO

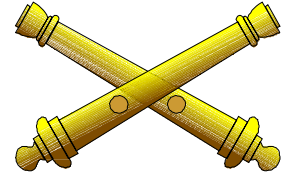
p. 3-18

- Computed by BCS if observer # entered in OBS/FST

____;P: _;SB: _/_/_/_/_;C: ____;SG: __, __;DT: __, __/_/_/_;ID: ____;A: _;
FM;MTO;OB: TGT: ____;KNPT: ____;PER: **23**;ANGLET: **7** ;
ME: / ;CONT: / ;MIS: ____;OF: ____;FPF: ____;CPRHD: **R / 7 / 5 / 16**;
SHAJ: ____;FZE: ____;AUF: // // // ;SHEF: / ;FZ: / ;
UNITS: ____;VOL: ____;

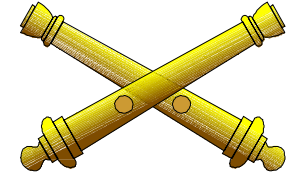
U
S
A
F
S

GUNNERY DEPARTMENT



DIR 1300, L100, -50 FFE, k

**U
S
A
F
A
S**



FM; SUBS

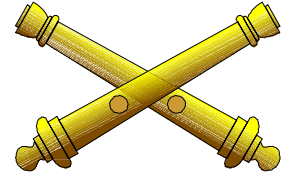
p. 3-18 to 3-21

- Most fields are the same as FM; CFF
- BCS will assume previously entered values for most fields unless the operator enters new data

_____;P:____;SB:___/___/___/___;C:____;SG:____,____;DTG:____,____/___/___;ID:____;A:____;_
 FM;SUBS;TGT:**AB10XX**;CORD:____/____/____;GZ____;
 DIR:**1300**/____;DIST:____;SHIFT:**L/100**_-/**50**___/___;SHFCOR:____;
 OBSN:____;SIT:____;TYPE:____/____;DISPO:____/____;CAS:____;
 EOM:____;RAT:____;CONT:____/**FFE**____;ME:____/____;UFFES:___/___/___/___;PTM:_____
 ASF:____/____/____;SH:____/____;FZ:____/____,____/____;RDS:____
 LOT:___/___;CHG:____;LOTS:___/___/___;CHGS:___/___;FIRINT:____;CMD:____;SHEAF:____;
 PTF:____;SPTF:___/___/___/___;SHTF:___/___/___/___/___;
 PFFE:____;SHFFE:___/___/___/___/___;REP:____;ALT:____;GTAZ:____;GTRG:____;
 ACORD:____/____/____;AGZ:____;
 HOB:____;RG:____;TOF:____;MAXORD:____;
 RARP:____;RATI:____;TIRPT:____;LOT2R:____;VOLCMD:____;CSLOAD:____;RPT:____;

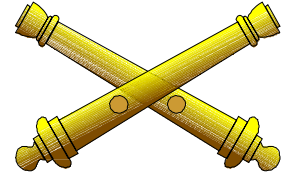
U
S
A
F
S

GUNNERY DEPARTMENT

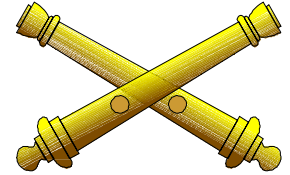


R10, EOM, PLT DISP, EST 15 CAS, k

**U
S
A
F
A
S**



BCS SPECIAL SITUATIONS



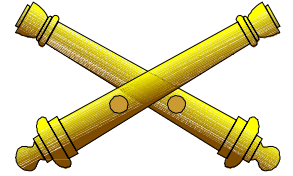
GFT SETTING / TGPC

p. 8-17 to 8-19

- **BCS database stores non-std conditions, therefore the BCS applies non-std conditions to every fire mission**
- **Conduct Dry-Fire MSN using polar method of target location (with False observer at base piece location) and use the BCS solution to construct a GFT Setting for manual backup**
- **Use AOF for Direction & usually a MET Check Gage Point for range.**

U
S
A
F
A
S

GUNNERY DEPARTMENT

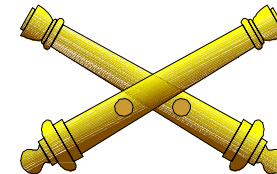


Determine a GFT Setting using the following UCARET:

GFT K, CHG 2, LOT A/G, RG 4080, EL ? TI ? (M582)

**U
S
A
F
A
S**

GUNNERY DEPARTMENT



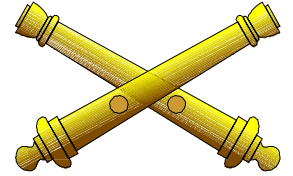
Use the following equations to determine converged TGPC's:

$$\begin{array}{r} \# \quad \text{TI} \\ \hline -\text{BP TI} \\ \hline \text{TI CORR} \end{array}$$

$$\begin{array}{r} \# \quad \text{DF} \\ \hline -\text{BP DF} \\ \hline \text{DF CORR} \end{array}$$

$$\begin{array}{r} \# \quad \text{QE} \\ \hline -\text{BP QE} \\ \hline \text{QE CORR} \end{array}$$

U
S
A
F
S



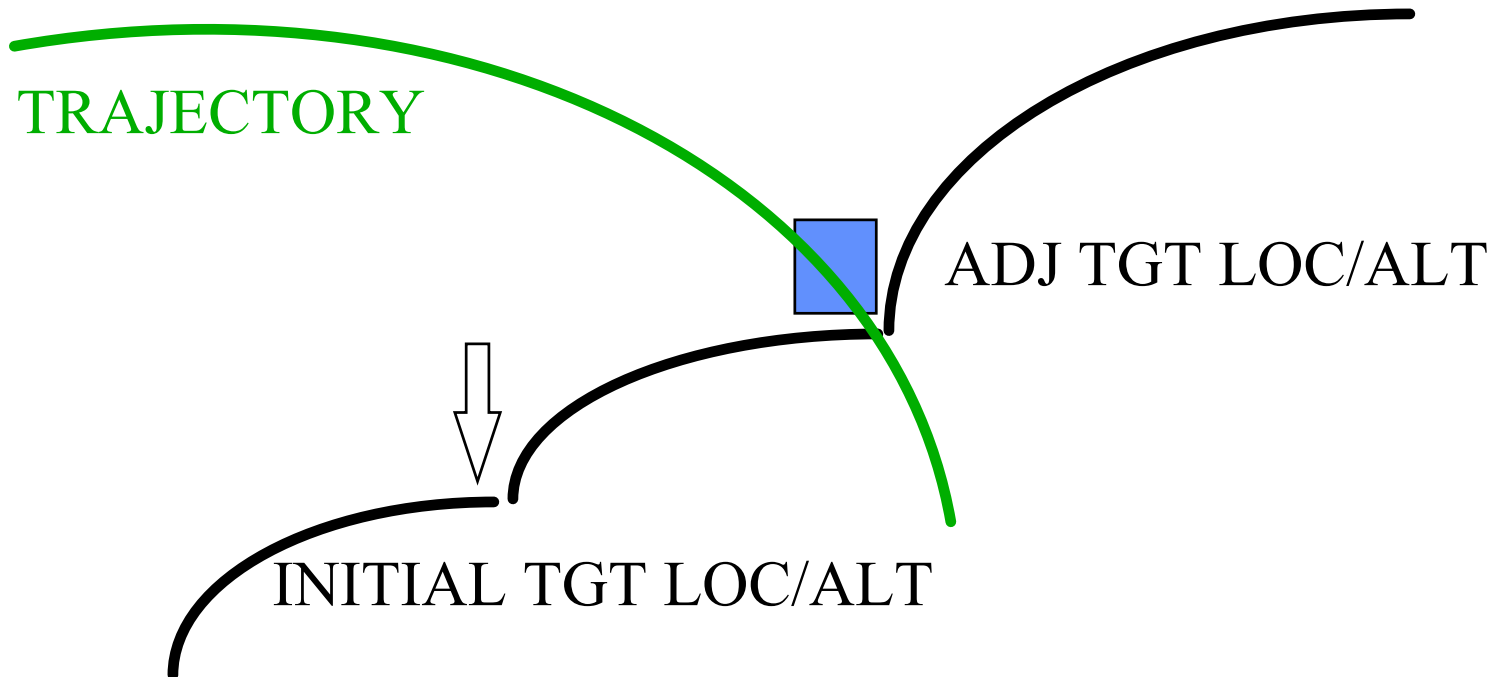
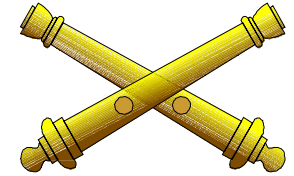
p. 6-1

REPLOT

**U
S
A
F
A
S**

GUNNERY DEPARTMENT

REPLOT

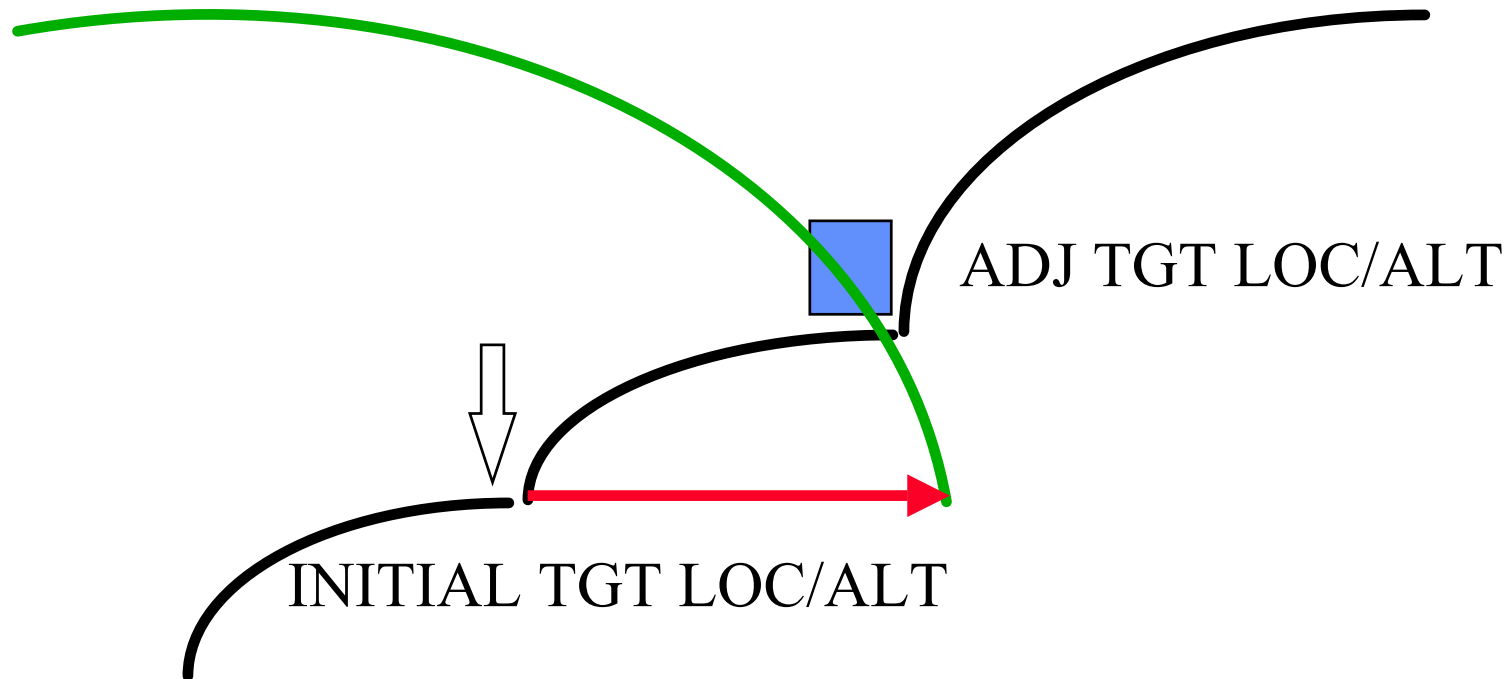
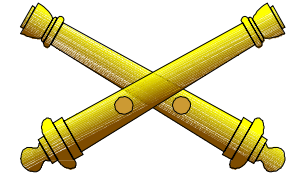


- PAGE 6-1
- OBS TRANSMITS REFINEMENT AND REC AS TGT
- **TRAJECTORY IS CORRECT, HOWEVER.....**
ACTUAL TGT ALTITUDE AND LOCATION ARE NOT ACCURATE

U
S
A
F
A
S

GUNNERY DEPARTMENT

REPLOT

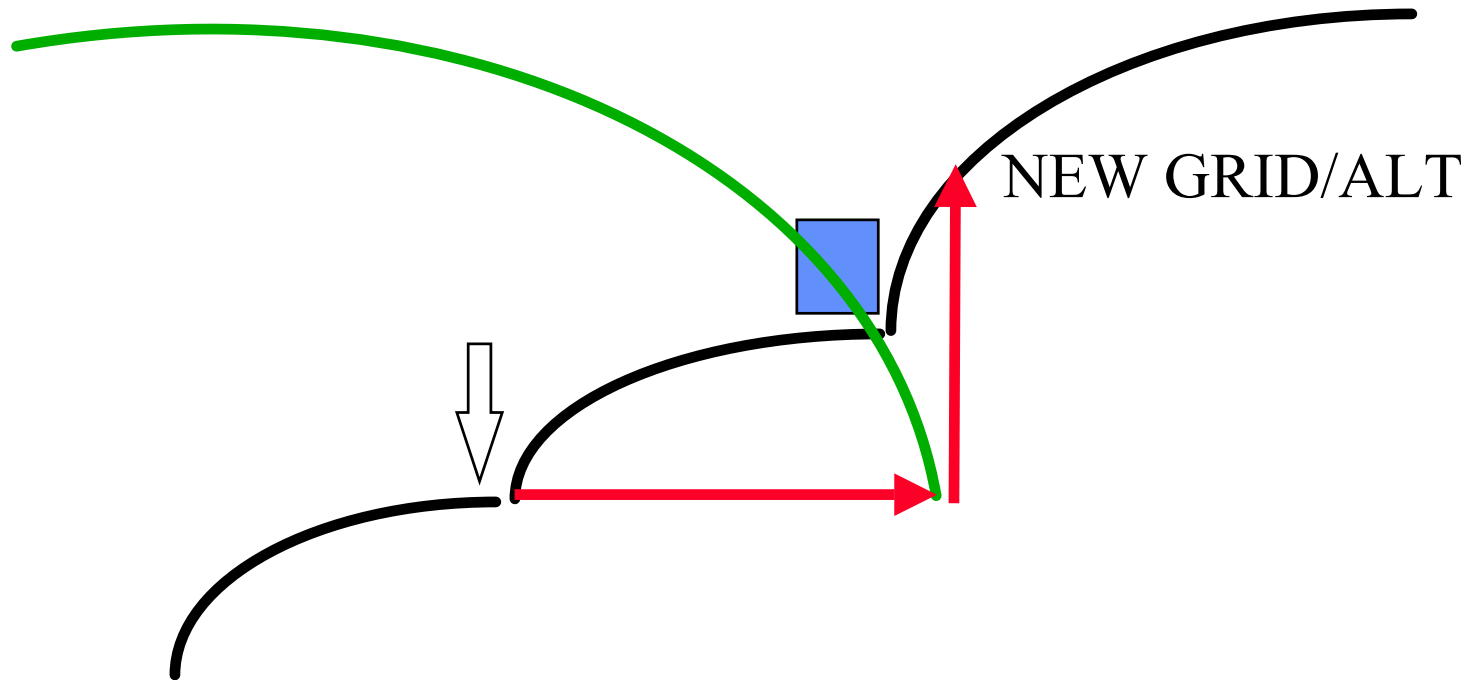
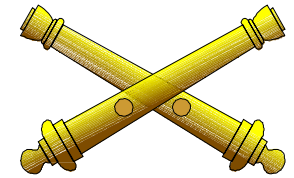


- TGT MUST BE ALONG TRAJECTORY
- COMPUTER ASSUMES ALTITUDE IS UNCHANGED FROM INITIAL CFF
- THE DETERMINED GRID IS AT INITIAL ALT

U
S
A
F
A
S

GUNNERY DEPARTMENT

REPLOT

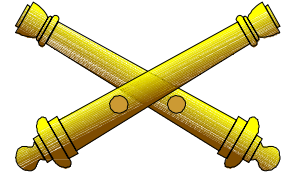


- **VCO DETM'S ALT AT GRID DETERMINED**
- **COMPUTER ASSUMES TGT IS AT THIS ALTITUDE ALONG TRAJECTORY**
- **NEW GRID IS DETERMINED**

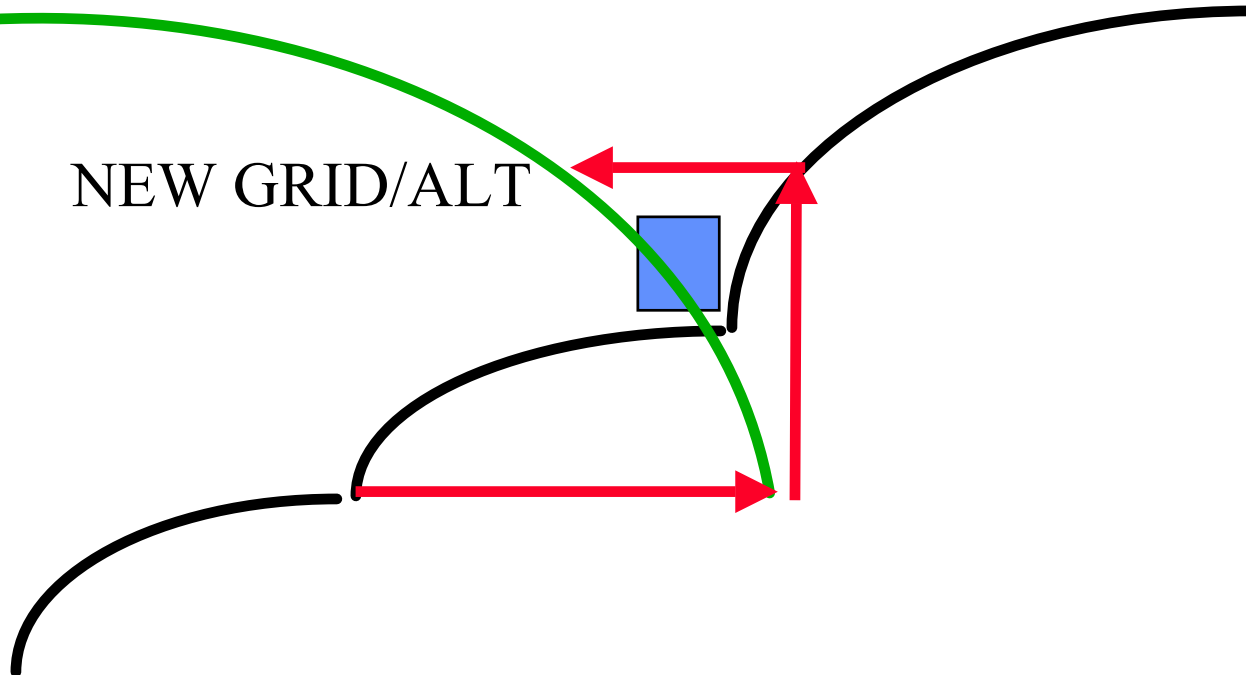
**U
S
A
F
S**

GUNNERY DEPARTMENT

REPLOT



NEW GRID/ALT

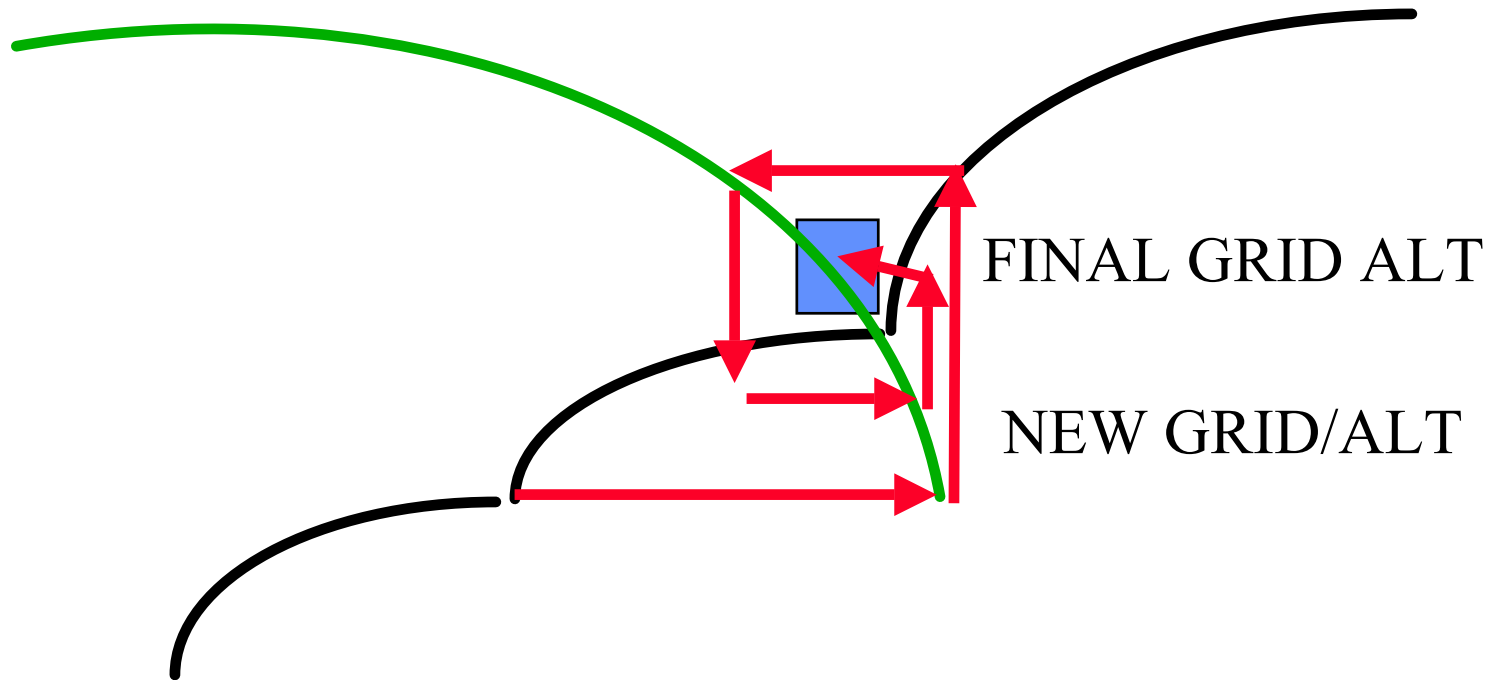
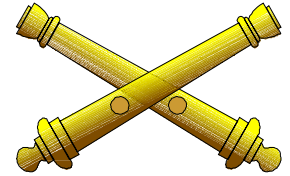


- VCO DETM'S ALT AT GRID DETERMINED
- COMPUTER ASSUMES TGT IS AT THIS ALTITUDE ALONG TRAJECTORY
- NEW GRID IS DETERMINED
- PROCEDURE REPEATED

U
S
A
F
S

GUNNERY DEPARTMENT

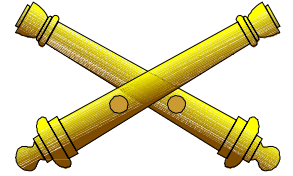
REPLOT



- REPLOT CONTINUES UNTIL A CONTOUR INTERVAL IS SPLIT
- GRID THEN DETERMINED IS ACCURATE
- PROCEDURES FUNCTIONS THROUGH SUCCESSIVE APPROXIMATION

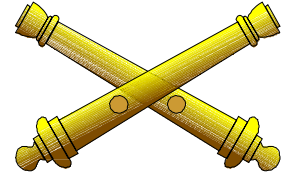
U
S
A
F
S

GUNNERY DEPARTMENT



ILLUMINATION

**U
S
A
F
A
S**

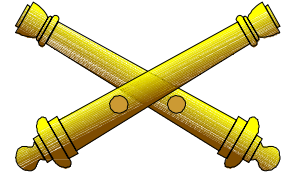


FDC CONTROLLED COORDINATED ILLUMINATION

p. 6-5

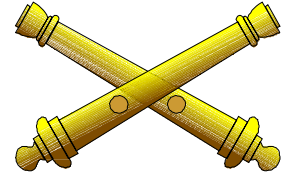
- **THE OBSERVER WILL TRANSMIT COORDINATED ILLUM TO THE FDC**
- **THE OBSERVER WILL TRANSMIT ILLUMINATION MARK AT THE TIME THE TARGET IS BEST ILLUMINATED**
- **USE LEGA ENTRIES FOR METHOD OF FIRE IN APP. C**

**U
S
A
F
S**



FDC CONTROLLED COORDINATED ILLUMINATION

- **THE FDC TIMES THE INTERVAL BETWEEN ACTUAL FIRING OF ROUNDS AND TRANSMISSION OF ILLUMINATION MARK**
- **COMPARING THIS INTERVAL TO THE HE TOF, THE FDC CONTROLS FIRING SO HE ROUNDS IMPACT AT TIME OF MAXIMUM ILLUMINATION**

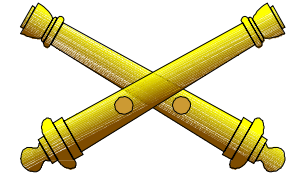


COORDINATED ILLUMINATION



62 SECONDS FROM ILLUM SHOT TO MARK

- **FDC FIRES ILLUM AND STARTS TIMER**
- **OBS TRANSMITS “ILLUMINATION MARK” WHEN TGT AREA IS BEST ILLUMINATED**
- **TOTAL ELAPSED TIME IS MARK TIME**

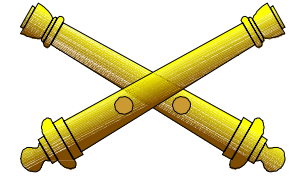


COORDINATED ILLUMINATION

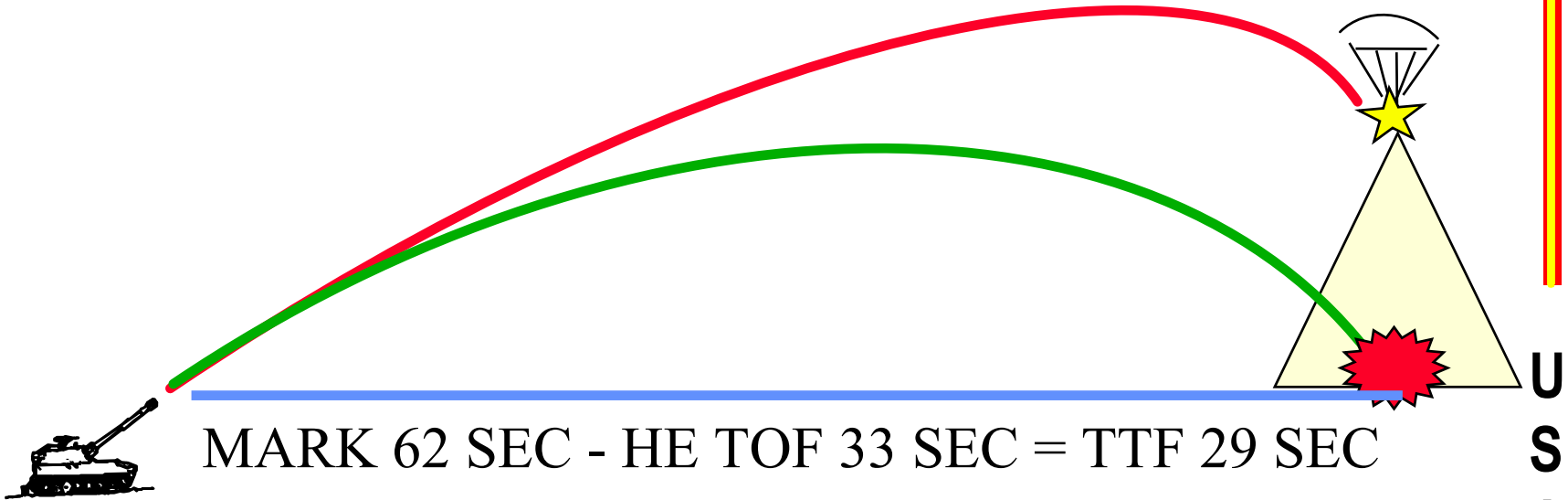


HE TOF 28 SEC + 5 SEC REACTION TIME = 33SEC

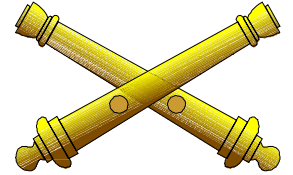
- **OBS TRANSMITS HE CALL FOR FIRE**
- **FDC DETERMINES HE TIME OF FLIGHT AND ADDS 5 SEC REACTION TIME**
- **FDC SUBTRACTS HE TOF + 5 SECS FROM MARK TIME TO DETERMINE TIME TO FIRE (TTF) HE**



COORDINATED ILLUMINATION



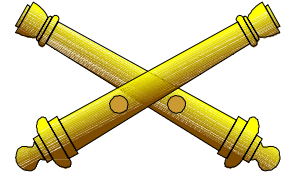
- **FDC FIRES ILLUM, STARTS TIMER**
- **FDC FIRES HE AFTER DETERMINED AMOUNT OF TIME (TTF) HAS ELAPSED**
- **HE BURSTS UNDER OPTIMUM ILLUM**



CONTINUOUS ILLUMINATION

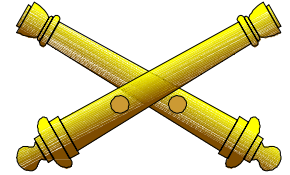
- **FDC WILL FIRE ILLUMINATION CONTINUOUSLY (RATE OF FIRE DEPENDS UPON PROJECTILE) WHILE THE OBSERVER ADJUSTS THE HE**
- **THIS METHOD EXPENDS A LARGE QUANTITY OF AMMO AND IS THE LEAST DESIRABLE METHOD**

GUNNERY DEPARTMENT



LASER MISSIONS

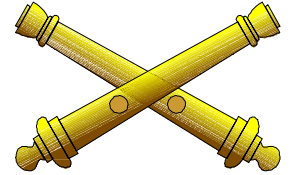
**U
S
A
F
A
S**



SIX TYPES OF LASER MISSIONS

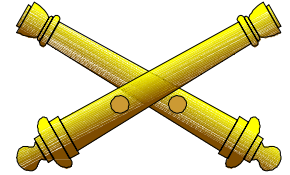
p. 6-2

- | | |
|----------------------------|--------------------|
| • STATIONARY TARGET | - STGT |
| • PREDICTED TARGET | - PRED |
| • DRAW TARGET | - DRAW/LAST |
| • RESECTION | - RESECT |
| • TRILATERATION | - TRILAT |
| • TRIANGULATION | - TRIANG |



OBSERVER SELF LOCATION MISSIONS

- **Allows BCS operator to determine Observer location based upon direction, distance and/or VA from observer to one or two known points**
- **BCS automatically updates FM;OBCO format with new observer information**

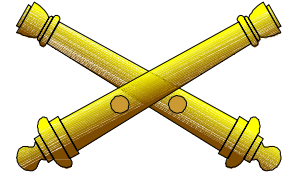


STGT TARGET MISSION

p. 6-2

- **THE OBSERVER LASES THE TARGET, AND AN ADJUSTING ROUND IS FIRED**
- **THE OBSERVER THEN LASES THE BURST OF THE ADJUSTING ROUND**
- **THE BCS WILL COMPARE THE LASINGS OF THE TARGET AND THE BURST, AND DETERMINE A CORRECTION TO MOVE THE NEXT ROUND TO THE TARGET**

**U
S
A
F
S**

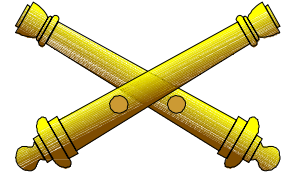


PREDICTED POINT

p. 6-2

- **OBSERVER LASES A POINT WHICH THE TARGET IS EXPECTED TO MOVE**
- **THE MISSION IS REQUESTED AS AN AMC FFE MISSION**
- **THE OBSERVER CONTROLS THE FIRING TO ENSURE THE SIMULTANEOUS ARRIVAL OF THE TARGET AND PROJECTILE AT THE PREDICTED POINT**

**U
S
A
F
S**

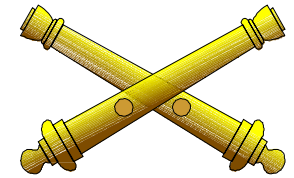


LASER DRAW MISSION

p. 6-2

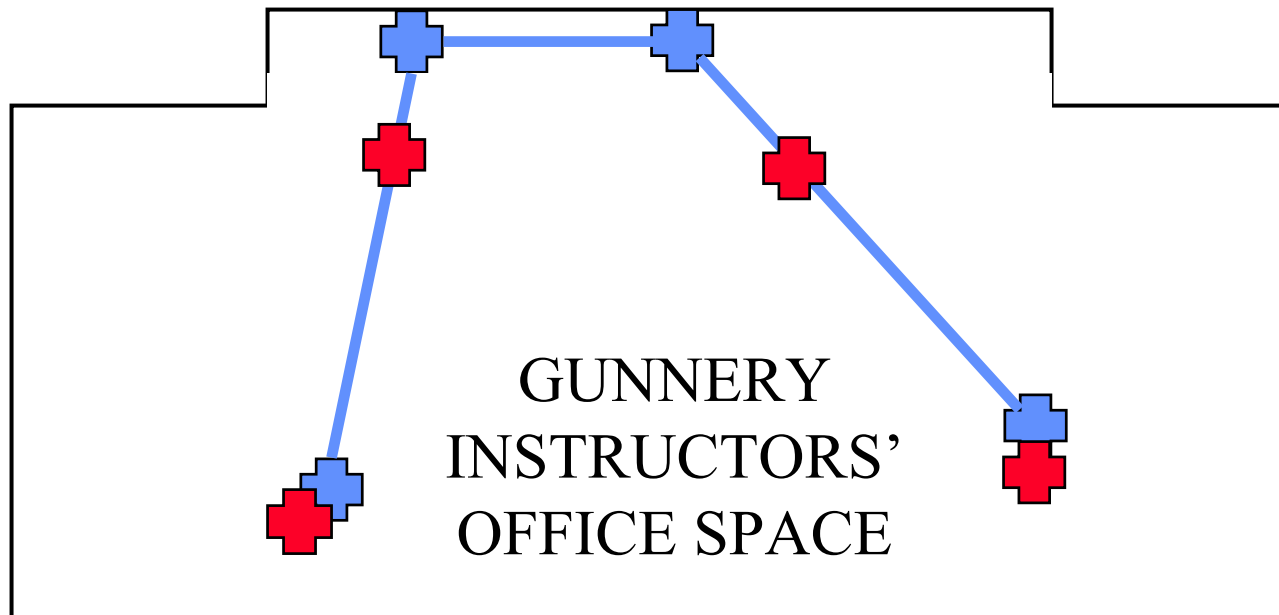
- **THE OBSERVER IDENTIFIES AN IRREGULAR SHAPED TARGET BY LASING 2 TO 8 POINTS**
- **REQUIRES THE BCS TO HAVE AT LEAST 3 GUNS IN BCS; PIECES OPERATIONAL**

**U
S
A
F
A
S**



LASER DRAW MISSION

p. 6-2

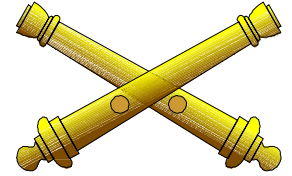


 **LASED POINTS**

 **HOWITZER AIMPOINTS**

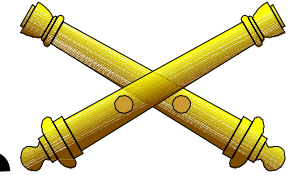
**U
S
A
F
S**

GUNNERY DEPARTMENT



BCS PRIORITY MISSIONS

**U
S
A
F
A
S**



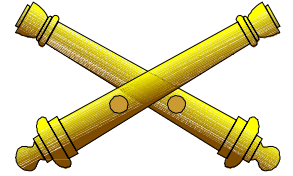
BCS PRIORITY MISSIONS

p. 6-16 to 6-19

- **BCS CAN STORE 4 PRIORITY MISSIONS FOR 155MM HOWITZERS AND 1 FOR 105MM.**
- **BCS CAN ASSIGN EITHER:**
 - **155MM**
 - **1 FPF AND 3 PRIORITY COPPERHEAD MISSIONS.**
 - **OR 4 COPPERHEAD MISSIONS.**
 - **105MM**
 - **1 FPF**

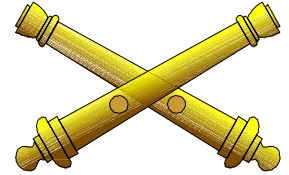
**U
S
A
F
S**

GUNNERY DEPARTMENT



FINAL PROTECTIVE FIRE

**U
S
A
F
A
S**



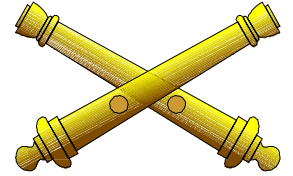
FPFs

p. 6-16

- All guns are laid on FPF data when not firing
- Adjusted FPF vs. Non-adjusted FPF
- FPF Sheafs
 - Wall of Steel: do not leave holes in the wall
 - Linear sheaf: length is based on burst width
 - Laser Draw: traces actual terrain
- Entered using FM;CFF Format

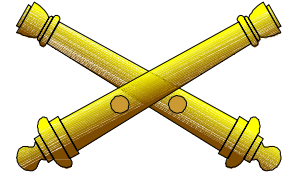
U
S
A
F
A
S

GUNNERY DEPARTMENT



M712 COPPERHEAD

**U
S
A
F
A
S**



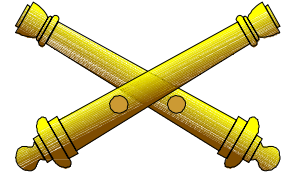
COPPERHEAD MISSION PROCESSING (CON'T)

p. 6-18

- **THE TOTAL NUMBER OF ROUNDS FIRED WILL NOT BE GREATER THAN SIX AND THE MAXIMUM NUMBER OF HOWITZERS ASSIGNED TO THE MISSION WILL BE TWO**
- **ASSIGNMENT OF SPECIFIC HOWITZERS TO FIRE IS BASED ON COMMUNICATION STATUS CODE IN BCS; PIECES (“C” or “W”)**

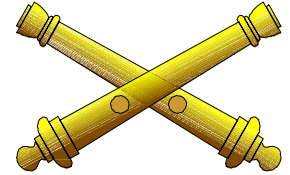
**U
S
A
F
S**

GUNNERY DEPARTMENT



FIRE PLANS

**U
S
A
F
A
S**

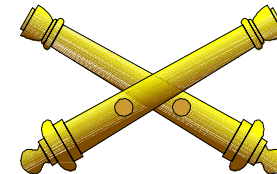


FIRE PLANS

CHAPTER 4

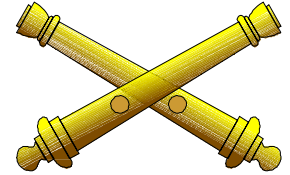
- **FIREPLAN TARGETS ARE ENTERED USING THE NNFP;CFF FORMAT**
- **TARGETS CAN BE INPUT INDIVIDUALLY BY BCS OPERATOR OR CAN BE TRANSMITTED DIGITALLY TO THE BCS AND ENTERED AS A GROUP**

GUNNERY DEPARTMENT



____;P:____;SB:____/____/____/____;C:____;SG:____,____;DTG:____,____/____/____;ID:____;A:____;
NNFP;CFF;TGT:____;CORD:____/____/____;GZ:____;
PLAN:____;PHASE:____;HHOUR:____/____;H:____;FIRINT:____;DTG:____/____/____;
ME:____/____;SH:____/____;FZ:____/____,____/____;RDS:____;SIZE:____/____;ATT:____;
MMD:____/____;FZOPT:____;HOB:____;CONOPT:____;
WPNLOC:____/____/____;WPNGZ:____;
PTF:____;SPTF:____/____/____/____;SHTF:____/____/____/____/____/____;
LOTS:____/____/____;CHGS:____/____;HOB:____;FR:____;

U
S
A
F
S



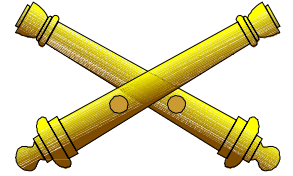
EXECUTION of FIRE PLANS

p. 4-3

- **FM;CFF:O GENERATED 10 MINUTES BEFORE TIME TO FIRE**
 - **TIME TO FIRE EQUALS H-HOUR PLUS H, MINUS TIME OF FLIGHT PLUS 5 SECOND REACTION TIME**
- **FM;CFF:O PLACED IN INPUT QUEUE FOR OPERATOR EXECUTION, PROCESSING, AND FIRING**
- **CYCLE THROUGH ALL PLANNED TARGETS IN THIS MANNER**

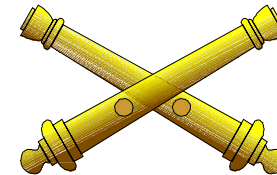
**U
S
A
F
S**

GUNNERY DEPARTMENT

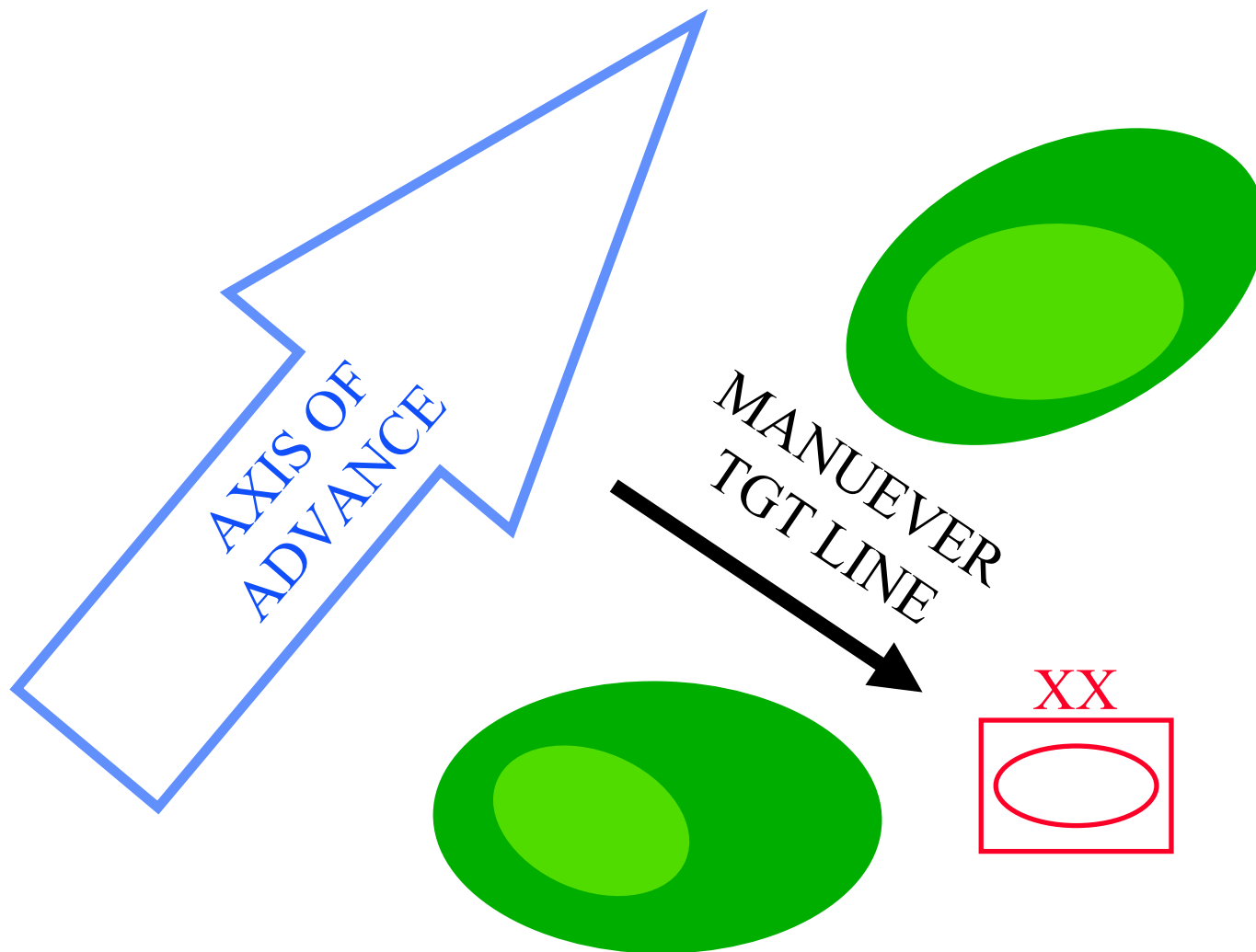


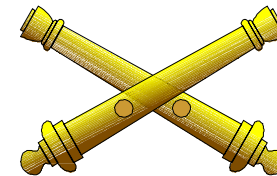
QUICK SMOKE

**U
S
A
F
A
S**

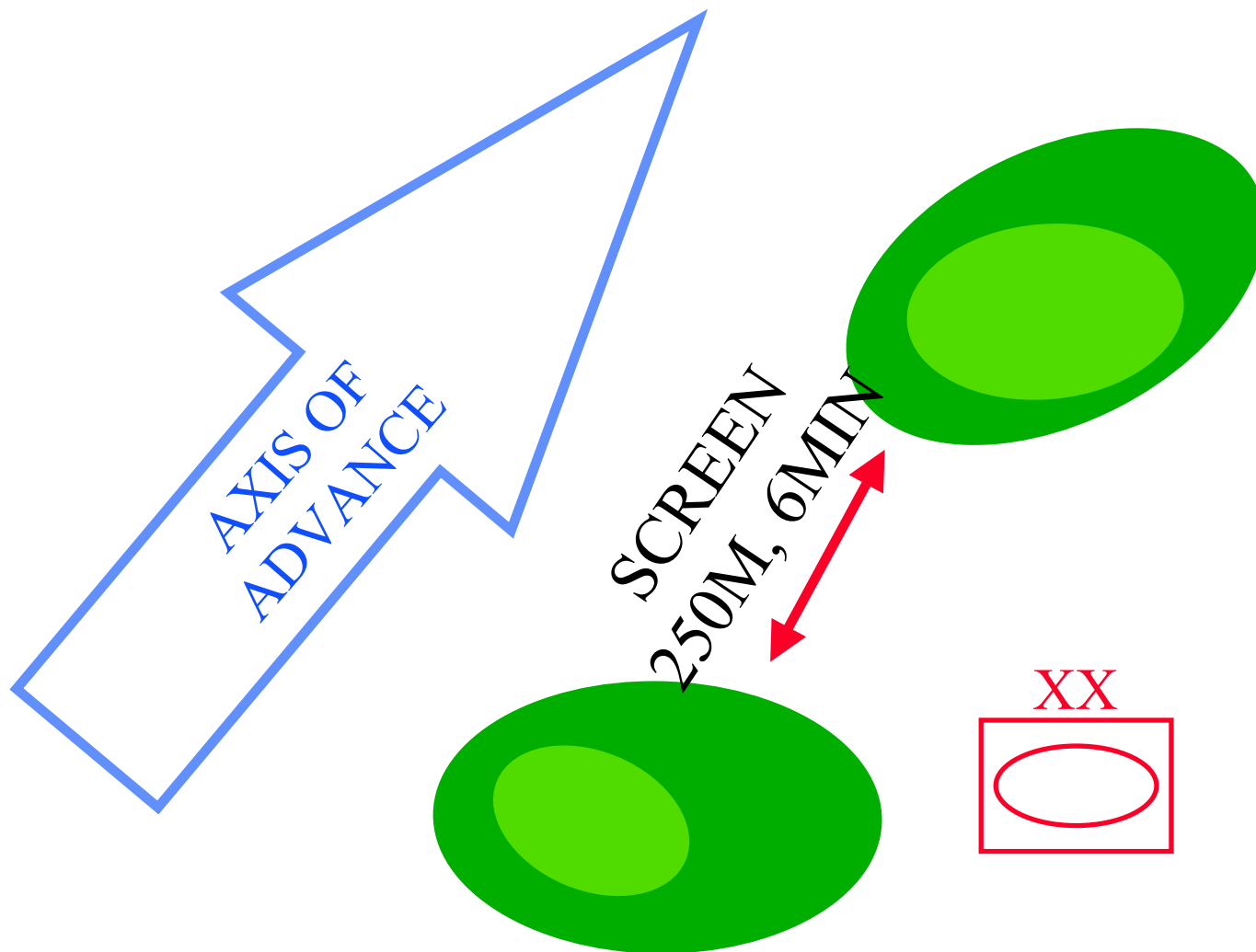


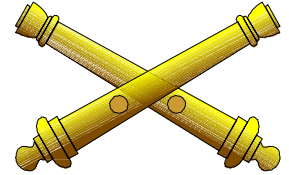
QUICK SMOKE





QUICK SMOKE

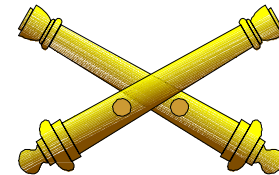




QUICK SMOKE

p. 6-8 to 6-15

- **OBSERVER TRANSMITS CFF IN THE FORM OF LMDIRT-**
 - **LENGTH OF SCREEN**
 - **MANUEVER-TGT DIRECTION**
 - **DIRECTION OF WIND**
 - **DURATION OF SCREEN**
- **FDO DETERMINES FIRE ORDER**
- **FDC DETERMINES FIRING DATA**



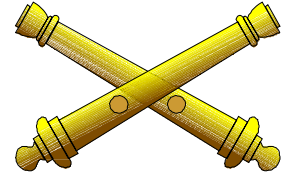
CALL FOR FIRE

F21 de H55 FFE_K

GRID 1450 4670 EST ALT 450_K

SCREEN MOVEMENT 250 M, DIR 1950, TAIL, 6MIN_K

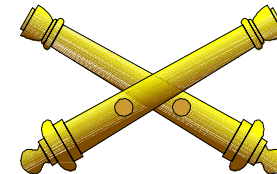
**U
S
A
F
S**



FDC DETERMINES

- **RELATIVE HUMIDITY 50%**
- **WINDSPEED LINE 00 16 KNOTS**
- **LOCATION - GERMANY**
- **CURRENT CLOUD COVER - CLOUDY**
- **TEMPERATURE OUTSIDE - WARM**

GUNNERY DEPARTMENT



M825 SMOKE FIRE ORDER

PASQUILL CATEGORY

D

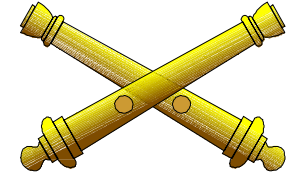
SMOKE TABLE

D – 9

WINDSPEED

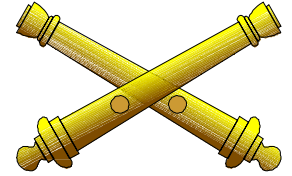
16

**U
S
A
F
S**



FROM SMOKE TABLE

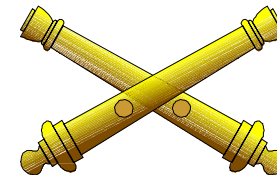
| | |
|---------------|------------|
| R1 | <u>4</u> |
| R2 | <u>2</u> |
| FIRE INTERVAL | <u>1.5</u> |



NUMBER OF VOLLEYS TO FIRE

$$\frac{\text{SMOKE DURATION}}{\text{FIRE INTERVAL}} = \text{TOTAL NUMBER OF VOLLEYS}$$

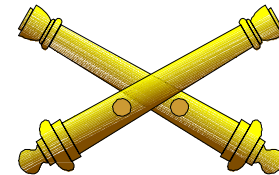
$$\frac{6}{1.5} = 4$$



WHO WILL FIRE?

| LEFT PLT | | CENTER PLT | | RIGHT PLT | | |
|-------------|----------|---------------|--|--------------|----------|----|
| | | | | | | |
| X | X | | | X | X | R1 |
| | | | | X | X | R2 |
| | | | | X | X | R2 |
| | | | | X | X | R2 |

GUNNERY DEPARTMENT

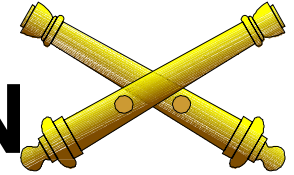


FIRE ORDER

**RIGHT PLT 4 RDS, LEFT PLT 1
RD, BRAMC, SH M825**

**U
S
A
F
S**

GUNNERY DEPARTMENT



FIRE CONTROL INFORMATION CORRECTION

FOR VERSION 10 SOFTWARE ONLY

- **FFE**
 - RANGES LESS THAN 10K **ADD 50M** TO TGT ALT
 - RANGES GREATER THAN 10K **ADD 100M** TO TGT ALT
- **AF**
 - RANGES LESS THAN 10K **UP 50M** PRIOR TO FIRING M825
 - RANGES GREATER THAN 10K **UP 100M** PRIOR TO FIRING M825

U
S
A
F
S